Amendment to the Claims:

1. to 32. Cancelled

33. (Previously Presented) A method of cooling of working parts of a mold for dies and molding of articles using dies wherein the mold has at least one completely closed chamber having air substantially removed therefrom and having a single quantity of liquid therein which extends to cover at least one of the areas from which heat is to be taken, each of said at least one completely closed chamber being integrated with the mold and a space above the single quantity of liquid and within the completely closed chamber in which pressure within the space is caused to be set at a level which will enable the single quantity of liquid to boil at a selected temperature, said selected temperature being at a level such that the temperature is below a temperature of the areas from which heat is to be taken this being by reason of, as a first step, filling of the completely closed chamber with the single quantity of liquid and then extracting a selected portion of the single quantity of liquid without allowing air to replace the extracted liquid, and passing at a selected cooling temperature, the single quantity of liquid through condensing means to effect, by such cooling, condensation of vapor of the single quantity of liquid in the space to return the condensed vapor to the single quantity of liquid by gravity.

34. (Previously Presented) A method as claimed in claim 33 wherein the single quantity of liquid is water.

35. (Previously Presented) A method as claimed in claim 33, wherein the mold is a die, and includes at least a heating means located within the completely closed chamber within the liquid such that during a standby time, the temperature of the die or mold can be kept within the selected temperature.

36. to 43. Cancelled

44. (Previously Presented) A method of cooling of working parts of a mold for molding of articles wherein the mold has at least one completely closed chamber having air substantially excluded therefrom and having a single quantity of fluid therein, the liquid portion of the fluid extends to cover at least one of the areas from which heat is

to be taken, each of said at least one completely closed chamber being integrated with the mold and a space above the liquid portion of the single quantity of fluid and within the completely closed chambers in which pressure within the space is caused to be set at a level which will enable, whenever there is a temperature differential between any two locations within the chamber, the liquid portion of the single quantity of fluid to boil at the location with the higher temperature and the resultant vapor to condense at the location with the lower temperature, such effect being used to maintain a substantially uniform temperature throughout the completely closed chamber which is also maintained at a selected temperature by providing, in the space above the liquid portion of the single quantity of fluid, a condenser which is adapted to have its temperature kept at a lower temperature than that of a location from which heat is to be taken this being by reason of, as a first step, having filled the completely closed chamber with the single quantity of fluid and then extracting a measured portion of the fluid within said completely closed chamber to leave within the chamber only the single quantity of fluid, a portion of which will be in the liquid phase and the remainder of which will be in the vapor phase.

45. (Previously Presented) A method as claimed in claim 44, where there is an arrangement within the completely closed chamber whereby the vapor of the single quantity of fluid is caused to be condensed by heat transfer to the condenser and to then return as liquid to the liquid portion of the single quantity of fluid.

46. (New) A method of effecting heat transfer within a mold to assist in effecting substantial uniformity of temperature of molding surfaces of a molding cavity, at least one adjacent closed chamber adjacent to the molding cavity, a separating wall or walls between the cavity and the chamber, and selected fluid filling to an extent to effect substantial exclusion of any other fluid, the closed chamber so that there is both a liquid portion and a saturated vapor portion of the said fluid within the chamber and only this fluid, and a condenser within the chamber.

47. (New) The method as claimed in claim 46, wherein the said separating wall or walls between the cavity and the chamber have a substantially uniform thickness

through substantially all of the wall or walls through which cooling is effected and there is at least one adjacent closed chamber to the molding cavity.

48. (New) The method as claimed in claim 46, wherein the level of the liquid portion is sufficient to cover an area or areas of the said wall or walls of the chamber from which heat is to be taken.

49. (New) The method as claimed in claim 47, wherein the fluid is a single selected fluid and subject to exclusion of any other fluid, and the level of the liquid portion is sufficient to cover an area or areas of the said wall or walls of the chamber from which heat is to be taken.

50. (New) The method as claimed in claim 46 for molding a product including introducing a material to be molded into the mold where there is effected heat transfer within the mold for achieving the substantial uniformity of temperature of a substantial portion of the molding surfaces of the molding cavity.

51. (New) The method as claimed in claim 46, wherein said at least one adjacent closed chamber adjacent to the molding cavity is within the mold, the said wall or walls between the molding cavity and the chamber having the substantially uniform thickness

52. (New) The method as claimed in claim 50, wherein said at least one adjacent closed chamber adjacent to the molding cavity is within the mold, the said wall or walls between the molding cavity and the chamber having the substantially uniform thickness.

53. (New) The method as claimed in claim 50, wherein the level of the liquid portion is sufficient to cover an area or areas of the said wall or walls of the chamber from which heat is to be taken, and within the space above the liquid portion of the fluid, such space containing substantially only the vapor of the fluid, the pressure in the space thereby being substantially equal to the vapor pressure of the fluid which results in, upon there being a temperature differential between any portion of the surface of the wall or walls and a cooler portion of the surface of the wall or walls within the space, some liquid

of the fluid boiling at the said higher temperature location and effecting thereby removal of heat as latent heat of vaporization from the higher temperature location through a phase conversion of the fluid to a vapor and thereafter effecting, by condensation of the vapor which effects release of its latent heat of vaporization at said lower temperature location in the space above the said liquid whereby to reduce said temperature differential and, by condensation of vapor at a condenser which is cooled from time to time so as to control the temperature of the fluid to be within a selected range.

54. (New) The method as claimed in claim 52, wherein the level of the liquid portion is sufficient to cover an area or areas of the said wall or walls of the chamber from which heat is to be taken, and within the space above the liquid portion of the fluid, such space containing substantially only the vapor of the fluid, the pressure in the space thereby being substantially equal to the vapor pressure of the fluid which results in, upon there being a temperature differential between any portion of the surface of the wall or walls and a cooler portion of the surface of the wall or walls within the space, some liquid of the fluid boiling at the said higher temperature location and effecting thereby removal of heat as latent heat of vaporization from the higher temperature location through a phase conversion of the fluid to a vapor and thereafter effecting, by condensation of the vapor which effects release of its latent heat of vaporization at said lower temperature location in the space above the said liquid whereby to reduce said temperature differential and, by condensation of vapor at a condenser which is cooled from time to time so as to control the temperature of the fluid to be within a selected range.

55. (New) The method as claimed in claim 46 for operating a mold where there are means for effecting the heat transfer within the mold to effect substantial uniformity of the temperature of the molding surfaces on molding surfaces defining the molding cavity, and in which the level of the liquid portion is sufficient to cover an area or areas of the said wall or walls of the chamber from which heat is to be taken, and within the space above the liquid portion of the fluid, such space containing substantially only the vapor of the fluid, the pressure in the space thereby being substantially equal to the vapor pressure of the fluid which results in, upon there being a temperature

differential between any portion of the surface of the wall or walls and a cooler portion of the surface of the wall or walls within the space, some liquid of the fluid boiling at the said higher temperature location and effecting thereby removal of heat as latent heat of vaporization from the higher temperature location through a phase conversion of the fluid to a vapor and thereafter effecting, by condensation of the vapor which effects release of its latent heat of vaporization at said lower temperature location in the space above the said liquid whereby to reduce said temperature differential and, by condensation of vapor at a condenser which is cooled from time to time, the method including the step of effecting a cooling of the condenser by controlling a passage of coolant through the condenser so as to maintain the temperature of the fluid within a selected range.

56. (New) The method as claimed in claim 55 wherein the fluid fills the closed chamber with a liquid portion and a saturated vapor portion.

57. (New) An apparatus for molding products wherein there is included a mold adapted to effect heat transfer within the mold to assist in effecting substantial uniformity of temperature of a molding surface or surfaces defining a molding cavity, and within which mold there is at least one adjacent closed chamber, the mold having at least one separating wall between the molding cavity and the chamber, a selected fluid filling the closed chamber and only this fluid to the substantial exclusion of any other fluid with both a liquid portion and a vapor portion of the said fluid within said chamber and which is saturating any space in the chamber above the liquid portion, and a condenser within the chamber. .

58. (New) The apparatus as claimed in claim 57, wherein said at least one separating wall between the said cavity and chamber having a substantially uniform, the level of the liquid portion being sufficient to cover an area or areas of the said at least one wall of the chamber from which heat is to be taken, and, within the space above the liquid portion of the fluid, there is substantially only the vapor of the fluid, so that the pressure in the space thereby is substantially equal to the vapor pressure of the fluid.

59. (New) The apparatus as claimed in claim 57, wherein as a result of the pressure in the space thereby being substantially equal to the vapor pressure of the fluid there is a temperature differential between any portion of the surface of the wall or walls and a cooler portion of the surface of the wall or walls within the space, some liquid of the fluid boiling at the said higher temperature location and effecting thereby removal of heat as latent heat of vaporization from the higher temperature location through a phase conversion of the fluid to a vapor and thereafter effecting, by condensation of the vapor, which condensation effects a release of its latent heat of vaporization at a said lower temperature location in the space above the said liquid whereby to reduce said temperature differential and, by condensation of vapor at a condenser which is cooled from time to time so as to control the temperature of the fluid to be within a selected range of temperatures.

60. (New) The apparatus as claimed in claim 58, wherein as a result of the pressure in the space thereby being substantially equal to the vapor pressure of the fluid there is a temperature differential between any portion of the surface of the wall or walls and a cooler portion of the surface of the wall or walls within the space, some liquid of the fluid boiling at the said higher temperature location and effecting thereby removal of heat as latent heat of vaporization from the higher temperature location through a phase conversion of the fluid to a vapor and thereafter effecting, by condensation of the vapor, which condensation effects a release of its latent heat of vaporization at a said lower temperature location in the space above the said liquid whereby to reduce said temperature differential and, by condensation of vapor at a condenser which is cooled from time to time so as to control the temperature of the fluid to be within a selected range of temperatures

61. A system for effecting heat transfer within a mold to assist in effecting substantial uniformity of temperature of molding surfaces of a molding cavity;

at least one adjacent closed chamber adjacent to the molding cavity;

a separating wall or walls between the cavity and the chamber;

a selected fluid filling to an extent to effect substantial exclusion of any other fluid, the closed chamber so that there is both a liquid portion and a saturated vapor portion of the said fluid within the chamber and only this fluid; and

a condenser within the chamber.

62. (New) The system as claimed in claim 61, wherein the chamber has a substantially uniform thickness and also has an even thickness, the fluid being a selected fluid and fills the enclosed chamber to the substantial exclusion of any other fluid, the closed chamber with a liquid portion and a saturated vapor portion.

63. (New) The system for effecting heat transfer within the mold to effect substantial uniformity of temperature of the molding surfaces as claimed in claim 61, wherein said molding surfaces defining a molding cavity, said separating wall or walls between the said cavity and chamber having a substantially uniform thickness, the level of the liquid portion is sufficient to cover an area or areas of the said wall or walls of the chamber from which heat is to be taken, and within the space above the liquid portion of the fluid, such space containing substantially only the vapor of the fluid, such that the pressure in the space thereby is substantially equal to the vapor pressure of the fluid which results in, upon there being a temperature differential between any portion of the surface of the wall or walls and a cooler portion of the surface of the wall or walls within the space, some liquid of the fluid boiling at the said higher temperature location and effecting thereby removal of heat as latent heat of vaporization from the higher temperature location through a phase conversion of the fluid to a vapor and thereafter effecting, by condensation of the vapor which effects release of its latent heat of vaporization at a said lower temperature location in the space above the said liquid whereby to reduce said temperature differential and, by condensation of vapor at the condenser which is cooled from time to time so as to control the temperature of the fluid to be within a selected range.